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EXAMINER

CADUGAN, ERICA E

ART UNIT	PAPER NUMBER
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3722

DATE MAILED: 11/29/2002

# 26

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/235,531

Applicant(s)

BIEBER ET AL.

Examiner

Erica E Cadugan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 9/11/2002 (RCE) and 9/20/2002 (Amdt).
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All   b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Faxing of Responses to Office Actions***

1. In order to reduce pendency and avoid potential delays, TC 3700 is encouraging FAXing of responses to Office Actions directly into the Group at (703) 872-9302 or, for responses after final rejection only, to (703) 872-9303. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account. Please identify the examiner and art unit at the top of your cover sheet. Papers submitted via FAX into TC 3700 will be promptly forwarded to the examiner.

### ***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 28a, 28b. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance. /

Note that the proposed amendment after-final rejection submitted 5/31/2002 was not entered, as stated in the advisory action mailed 6/21/2002, and thus the amendment to the specification that referenced these element numbers was not entered.

### ***Specification***

3. The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

***Response to Amendment***

4. The amendment filed December 20, 2001 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: in the new abstract, lines 2-3, Applicant added the following language: "a drive motor for rotatably and strikingly through a striking mechanism driving the drilling spindle". As previously described in the office action mailed September 20, 2001, the specification as originally filed did not provide that the motor both rotated and "strikingly drove" the spindle. As set forth in the disclosure as originally filed, the only teaching provided about the specific percussion mechanism is found on page 9, lines 3-8. Therefore, the specification as originally filed did not provide a teaching that the motor 11 that rotatably drives the spindle 13 (see page 8, lines 2-12) also "strikingly" drives the spindle 13. Note that the specification does provide that an "impact mechanism 28" is used "for delivering axial impacts against the drilling spindle 13" (page 9, lines 4-6), and thus the specification as originally filed would support a description of a motor that rotatably drives the spindle and an "impact mechanism" that strikingly drives the spindle.

Applicant is required to cancel the new matter in the reply to this Office Action.

***Claim Objections***

5. Claim 15 is objected to because of the following informalities: in the penultimate line, "too lin" should be --tool in--. Appropriate correction is required. ✓

6. Claim 18 is objected to because of the following informalities: in line 2, "axisand" should be --axis and--. Appropriate correction is required. ✓

***Claim Rejections - 35 USC § 112***

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 1-14 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Specifically, claims 1 and 8 set forth that the drive motor is “for rotatably and strikingly driving said drilling spindle”. However, as set forth in the disclosure as originally filed and described above, the only teaching provided about the specific percussion mechanism is found on page 9, lines 3-8. The specification does not provide a teaching that the motor 11 that rotatably drives the spindle 13 (see page 8, lines 2-12) also “strikingly” drives the spindle 13. Note that the specification does provide that an “impact mechanism 28” is used “for delivering axial impacts against the drilling spindle 13” (page 9, lines 4-6), and thus the specification as originally filed would support a claim limitation directed to an “impact mechanism”. Examiner suggests changing “a drive motor for rotatably and strikingly driving through a striking mechanism driving said drilling spindle” to language such as –a drive motor for rotatably driving said drilling spindle; an impact mechanism for strikingly driving said drilling spindle--.

9. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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In claims 1 and 8, it is unclear as claimed what is meant by the limitation "and is uncoupled from strikes of said drilling spindle". Firstly, a strike is not an object, and it is thus unclear how a non-object is "uncoupled" as claimed. Secondly, it is unclear as claimed whether the arresting device operates to uncouple some (unclaimed) striker from the spindle 13, or whether the arresting device is merely being set forth as a separate entity than some (again, unclaimed) striker (arresting device is "uncoupled"). As set forth in the response submitted 12/20/2001, it appears as though applicant is stating that this limitation is supposed to indicate that the arresting device is offset from the impact mechanism. Examiner suggests amending the claim to reflect this to overcome this rejection, e.g., assuming that Applicant adopts Examiner's previous suggestion to overcome the 112, 1<sup>st</sup> paragraph rejection, replace "and is uncoupled from strikes of said drilling spindle so that it is not subjected to the strikes" with language similar to – and wherein said arresting device is positioned such that it is not subject to strikes of the impact mechanism--.

There are several positively recited limitations that lack sufficient antecedent bases in the claims. Examples of these are: "the torque transmission" in claim 1, line 15 and claim 8, lines 15-16; "said driving spindle" in claim 15, line 9, claim 17, line 11, and claim 18, line 11.

In each of the independent claims 1, 8, and 16, it is unclear in the limitation "an intermediate shaft non-rotatably connected with said drilling spindle" what is meant by "non-rotatably", as the specification seems to indicate that the intermediate shaft 17 rotatably supports a gear 16 thereon (Figure 2 and page 8, lines 8-10), and that the intermediate shaft 17 also has teeth 18, 19 thereon for engagement with gears 20, 21 on the shaft of drilling spindle 13 (page 8, lines 10-12). In order for the shaft of motor 11 to ultimately drive the spindle 13, it appears that

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shaft 17 must rotatably connect to spindle 13 via the teeth 18, 19, and the gears 20, 21. Note that the specification does teach that when switching between transmission stages, the gears 20 and 21 are non-rotatably connected with spindle 13, but that these claims set forth that the tool receives a torque from the drive motor which can't occur if the intermediate shaft 17 and spindle 13 are non-rotatably connected as claimed. While applicant may be his or her own lexicographer, a term in a claim may not be given a meaning repugnant to the usual meaning of that term. See *In re Hill*, 161 F.2d 367, 73 USPQ 482 (CCPA 1947). Note that in the response submitted 12/20/2001, Applicant changed a different instance of the word "non-rotatably" to "rotatably" than the one described in this paragraph. Examiner suggests changing the instances of "non-rotatably" that Applicant changed in claims 1 and 8 in the response submitted 12/20/2001 to "rotatably" back to "non-rotatably" and changing the instances indicated in this paragraph to --rotatably--, and also changing the indicated instance in claim 16 to --rotatably-- for clarity.

As set forth in claims 1 and 8, last line, it is unclear what is meant by "it". ✓

In new claim 17, line 17, and in new claim 18, line 14, it is unclear via the use of the indefinite article "a" whether "a tool" is the same as the "tool" previously set forth in these claims. If it is the same, Examiner suggests changing "a tool" to --the tool-- or --said tool--.

***Claim Rejections - 35 USC § 103***

10. Claims 1-5, 7-12, and 14-18, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,433,082 (Bitter et al.) in view of U.S. Patent No. 5,788,021 (Tsai).

Bitter et al. teaches a hammer-drill (see title of invention) which has a motor housing 13 and a gear case 15 (column 3, lines 32-35 and Figures 1-2). The motor housing houses a motor (column 3, lines 35-36) which ultimately drives a tool chuck 19 threadedly connected to a forward end of spindle shaft 43 (Figure 2 and column 4, lines 12-15). Thus, the spindle shaft 43 inherently receives a moment during exchanging of the tool chuck. A “stage” of gears 35, 37, 39, 41 is provided between the motor shaft 25 (which constitutes an “intermediate shaft”, see Figure 2 and column 3, lines 51-67) and the spindle shaft 43. Specifically regarding claims 4 and 11, while Bitter et al. does not specifically describe the transmission ratio, note that the input gears 35, 37, 39 are smaller in diameter (Figure 2) than the output gear 41, and thus the output speed is slower than the input speed. Note that the motor or “intermediate” shaft 25 is radially offset from the spindle shaft 43 (Figure 2). Any number of elements taught by Bitter et al. could constitute a “component connected to said machine housing”. For example, as viewed in Figure 2, screws 17 are connected to the housing.

Bitter et al. does not teach an arresting device.

Tsai teaches an automatic output shaft locking mechanism for an electric tool such as a drill or a striking tool (column 1, lines 7-23). Tsai’s device utilizes a retaining ring 50, which constitutes a “disc”. The “disc” 50 has a plurality of radial projections 502 (Figure 2), which project outwardly from center hole 501 (see Figure 1). The center hole 501 constitutes a bearing seat which couples disc 50 to shaft 60. Tsai also teaches the use of a “claw coupling” 20 which has a plurality of axially extending claws 203 (see Figure 1). Tsai teaches that a motor output shaft is divided into an inner shaft 10 and an outer shaft 60 (column 2, lines 35-38 and Figure 1). When a torque is applied to the inner or intermediate shaft 10 (e.g., via the motor), the outer or



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output shaft 60 rotates (column 3, lines 28-35, and Figures 3 and 4). When a torque is applied to the output shaft 60 (e.g., manually), the disc 50 is locked in position (column 3, lines 35-60 and Figures 5 and 6) such that a chuck or a drill bit can be speedily and conveniently replaced (column 3, lines 60-64). Note that Tsai specifically teaches that the motor in such electric tools “drives a rotary shaft to drive directly **or via a speed change mechanism** a driven component at the front end of the drill for drilling purposes” (col. 1, lines 26-55, for example, and specifically lines 28-30). In other words, Tsai teaches that the device is used with motors that indirectly, such as “via a speed change mechanism”, drive a tool.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have added the automatic output shaft locking mechanism taught by Tsai to the drill taught by Bitter et al. via a substitution of the motor output shaft (including portions 10 and 60) and automatic locking mechanism taught by Tsai for the motor output shaft 25 taught by Bitter et al., such that Tsai’s motor output shaft that is “divided” into an inner 10 and outer shaft 60 separated by the arresting mechanism including disc 50 and “claw coupling” 20 (see Figure 1 of Tsai) replaces the shaft portion of the motor shaft 25 taught by Bitter et al., noting that in such a configuration, the inner shaft 10 taught by Tsai would be connected to the motor and the outer shaft 60 taught by Tsai would to the left side of the replaced shaft as viewed in Figure 2 of Bitter et al., (thus positioning the locking mechanism at an “end side” of a toothed gear 35 of the stage taught by Bitter et al.), for the purpose of allowing drill bits to be speedily and conveniently removed or replaced (Tsai, column 3, lines 60-64, for example).

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11. Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,433,082 (Bitter et al.) in view of U.S. Patent No. 5,788,021 (Tsai) as applied to claims 1, 2, 5, 8, 9, and 12 above, and further in view of U.S. Patent No. 3,030,818 (Zagar).

Bitter et al. in view of Tsai teaches all aspects of the invention as claimed in claims 6 and 13 as set forth in the above 103 rejection based thereon, but does not teach that the shaft 25 has a non-cylindrical cross section.

Zagar teaches the use of a gear 21, which is a driven disc. The gear 21 is mounted on a polygonal portion of a shaft 27 (Figures 1 and 3). The polygonally-mounted portion acts as a key coupling (column 1, lines 18-21).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a polygonal shaft as taught by Zagar for the motor shaft taught by Bitter et al. in view of Tsai such that the portion of the shaft that held the disc was polygonally-shaped for the purpose of providing a built-in key between the disc and the shaft, thus preventing slippage between the disc and the shaft.

### ***Response to Arguments***

12. Applicant's arguments filed September 20, 2002 have been fully considered but they are not persuasive.

13. Regarding one of the reasons for which claim 8 has been rejected under 35 USC 112, second paragraph, Applicant has asserted the following, on page 6 of the response filed September 20, 2002:

In connection with the Examiner's objection to claim 8, line 16 "the torque transmission" as lacking sufficient antecedent basis, it is respectfully submitted that in this claim before this term "a torque transmission" is mentioned, and therefore the use thereafter of the term "the torque transmission" is justified"

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However, as previously stated by the Examiner in the office action mailed March 6, 2002, note that the claimed "the torque transmission" is not the same torque transmission as the one previously set forth in the claim. The previously-claimed torque transmission was set forth as "a torque transmission **from said drive motor**" (claim 8, lines 14-15, for example), and the indicated one ("the torque transmission **from said tool holder**" in lines 15-16) is a transmission from the tool holder, i.e., is a **different** torque transmission. Again, Examiner suggests changing "the torque transmission" to --a torque transmission-- to overcome this rejection.

14. Applicant is asserting that one of ordinary skill in the art would not be motivated to provide Tsai's arresting device in the location described in the above rejection based on the combination of Bitter et al. (U.S. Pat. No. 5,778,021) and Tsai (U.S. Pat. No. 3,433,082). Primarily, Applicant is asserting that Tsai's teaching of locating the arresting device "in an output shaft of an electric hand tool" (col. 1, lines 58-59) or applying it to "output shafts of screw drives, drill drives, and impact drills" (col. 1, lines 18-20) somehow means that the Examiner is using hindsight reconstruction to locate Tsai's arresting device at an output shaft of the motor of a such tool, such as the shaft 25 taught by Bitter et al, i.e., is arguing that one of ordinary skill in the art would not apply Tsai's arresting device to intermediate shaft 25 of Bitter's device, but that one of ordinary skill in the art would instead apply Tsai's arresting device to spindle shaft 43 of Bitter's device. In other words, it appears that Applicant is arguing that Tsai's device is only used with an ultimate output shaft, which in the case of the Bitter tool would be the spindle shaft 43.

This is not persuasive for a number of reasons.

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Firstly, Tsai does not so limit the use of the device taught thereby. Note that in column 1, lines 18-20, for example, Tsai specifically teaches that the arresting device may be applied to output shafts of “drill drives”, i.e., not just the ultimate output shaft. Note that the shaft 25 taught by Bitter et al. is an “output shaft” of a “drill drive” since it is an output shaft of the driving motor. Note that Tsai was not relied upon to teach the offset shaft configuration of the drive.

Secondly, note that one of ordinary skill in the art, motivated by the teachings of Tsai [to provide the arresting device at an output shaft in order to “facilitate replacement of drill chucks, drill bits” etc. (col. 1, lines 58-63)] to provide Bitter’s device with the arresting device taught by Tsai would know that such an arresting device should be applied at the point of highest speed and lowest torque possible in order to prevent breakage of the device. Note that in the Bitter device, this point of highest speed and lowest torque is the point after the motor but before the transmission, which is at the output shaft 25.

Additionally, Applicant has provided a very limiting definition of the phrase “output shaft of the tool” in order to support Applicant’s statements that Tsai does not teach placing the arresting device in the location described by the Examiner. Applicant states:

The output shaft of a tool is the shaft which comes out of the tool and which displaces the spindle of the tool and which provides an axial percussion, and which also rotates the spindle of the tool and which provides the outputting torque.

However, the Examiner can find no teaching in the Tsai reference to so limit the definition of Tsai’s “output shaft”. Note that not all of Tsai’s specifically-taught examples of tools in which Tsai’s arresting device can be used are percussion tools that “provide an axial percussion” (see col. 1, lines 18-35, for example). Also, more importantly to the main portions

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of Applicant's arguments, note that Tsai specifically teaches that the motor in such electric tools "drives a rotary shaft to drive directly **or via a speed change mechanism** a driven component at the front end of the drill for drilling purposes" (col. 1, lines 26-55, for example, and specifically lines 28-30). In other words, Tsai teaches that the device is used with motors that indirectly, such as "via a speed change mechanism", drive a tool. Since Tsai's shaft that is "divided" into an inner 10 and outer shaft 60 is a motor output shaft (col. 2, lines 35-38, Figure 1), and Bitter provided the base teaching of a motor output shaft that indirectly, via transmission 21, drives a tool held by tool chuck 19, Tsai does provide a specific teaching that would lead one of ordinary skill in the art to apply Tsai's device to the **motor output shaft 25** of Bitter's device for the purposes taught by Tsai and described in the above rejection based thereon.

15. Applicant has further asserted that to apply the arresting device to the motor shaft 25 of Bitter's device (rather than to the spindle shaft 43) "does not make sense because it is the output shaft of the tool or the spindle of the tool which is the object to be locked and not any other component inside any gearing mechanism of the tool" and further states "[i]t is not the gearing or any component therein which is to be locked but instead the output shaft of the tool or the drilling spindle as in the present invention". Note that locking the motor shaft 25 would inherently serve to lock the spindle shaft 43 because the two shafts 43 and 25 are geared together via gears 35, 37, 39 (see Bitter et al., Figure 2 for example).

16. Applicant appears to be asserting that the combination of Bitter et al. and Tsai does not provide a teaching of an arresting device that is at a location "wherein it is not subject to strikes" (see the full paragraph on page 10 of Applicant's response filed September 20, 2002). However, this is not persuasive. As described in detail above, Tsai provides a motivation for providing an

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arresting device at a motor output shaft. Bitter provides a teaching of a motor output shaft 25 that is “at a location wherein it is not subject to strikes”, noting that the reciprocating or percussive movement of shaft 43 is created by a percussive device offset from the shaft 25 (Figure 2 of Bitter, also col. 4, lines 9-24 and col. 5, lines 14-25, for example).

17. In response to applicant's arguments against the references individually, (e.g., Applicant's assertion that “[n]one of the references disclose in a single word...” on page 11 of the response filed September 20, 2002) one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). As previously described in detail, Bitter teaches the offset shafts, and Tsai provides a teaching of an arresting device used at a motor output shaft, and further, Tsai provides a motivation for providing such an arresting device. Thus the references **in combination** teach the presently-claimed invention. Note specifically that such a **combination** provides the offset shafts wherein the arresting device is not subjected to strikes, as set forth in detail in the preceding paragraphs.

18. It is additionally noted that with respect to the limitation in claims 1 and 8 regarding the arresting device being “uncoupled from strikes of said drilling spindle so that it is not subjected to the strikes”, note that when Bitter's device is in hammer-drill mode, shaft 43 moves axially while supported by bearings 49 and 51, while the motor shaft 25 does not and the motor shaft 25 is offset from this shaft, and thus the motor shaft 25 (and thus the arresting device taught by Tsai) are not “subjected to strikes” (see Bitter, col. 3, line 51 through col. 4, line 12 and Figure 2). It is additionally noted that as described by Bitter, the drill can be switched to function as a

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drill rather than a hammer-drill (col. 5, lines 65-69, for example), and thus no shaft of Bitter's device is subject to "strikes" when the drill operates in the drill mode.

19. In response to applicant's argument that there is no suggestion to combine the references (p. 11, paragraph beginning "[f]irst of all..."), the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Tsai specifically teaches that the provision of such an arresting device enables chucks and drill bits or screw bits to be speedily and conveniently removed or replaced (col. 3, lines 60-64, col. 1, lines 58-63, for example).

20. It is also noted that Applicant continues to argue that the presently-claimed invention is a percussive drilling tool with an arresting device. Note specifically that on page 12 of the September 20, 2002 response, Applicant asserts the following:

...a hypothetical construction produced from the combination of references would also not include any measures which would protect the arresting device from the strikes, **as defined in all independent claims and in particular in claims 17 and 18.**

However, it is again noted that no limitations limiting the claimed invention to a percussive tool, nor any limitations directed to an arresting device protected from or not subject to strikes, are found in independent claims 15-16 (preambles set forth a "hand-guided drilling machine or percussion drilling machine", and there are no further limitations in claims 15-16 that would limit the claimed invention to a percussion drilling machine). Although the claims are

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interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

21. Applicant has also asserted that “the location of the arresting device between the intermediate shaft and the housing or its component is also not disclosed in the references” (response page 13, bottom). However, this is not persuasive. Note that, as described in detail above, the combination of Bitter and Tsai provides for the teaching of the arresting device at Bitter’s motor shaft 25. Note that the motor shaft 25 of the Bitter drill is located inside the housing (Figures 1 and 2). Merriam Webster’s Collegiate Dictionary, 10<sup>th</sup> ed. defines the word “between” as follows: “in the time, space, or interval that separates”. Note that the arresting device portion of the device taught by Tsai provided at the motor output shaft 25 of Bitter is located in the space or interval that separates the housing and the motor shaft 25, and is thus “between” the two. Also note that the limitation “a component connected with said machine housing” is sufficiently broad to encompass any component of Bitter’s device that is connected to the housing, and that there are many such components arranged such that the arresting device provided at the motor output shaft 25 of Bitter is located in the space or interval that separates the shaft and such a component. Note, for example, that screws 17 are connected to the housing and that the arresting device provided at motor shaft 25 is located in the space or interval separating the shaft 25 and the screws 17. Applicant’s assertions that “[t]o say that the arresting device of Tsai is located physically between the intermediate shaft and the housing of Bitter is the same as to say that it is located between the ground and the sky” (p. 14 of response, top) are unpersuasive. Applicant has not provided any claim language (emphasis added) that serves to distinguish the claimed invention from the Bitter and Tsai combination in this regard. Again,



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although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

22. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning (p. 14 of the response filed September 20, 2002, last paragraph), it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In the instant case, Tsai specifically teaches that the motor in the electric tools “drives a rotary shaft to drive directly **or via a speed change mechanism** a driven component at the front end of the drill for drilling purposes” (col. 1, lines 26-55, for example, and specifically lines 28-30). In other words, Tsai teaches that the device is used with motors that indirectly, such as “via a speed change mechanism”, drive a tool. Since Tsai’s shaft that is “divided” into an inner 10 and outer shaft 60 is a motor output shaft (col. 2, lines 35-38, Figure 1), and Bitter provided the base teaching of a motor output shaft that indirectly, via transmission 21, drives a tool held by tool chuck 19, Tsai does provide a specific teaching that would lead one of ordinary skill in the art to apply Tsai’s device to the **motor output shaft 25** of Bitter’s device. Furthermore, Tsai specifically provides a motivation for providing such an arresting device. Specifically, Tsai teaches that the provision of such an arresting device enables chucks and drill bits or screw bits

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to be speedily and conveniently removed or replaced (col. 3, lines 60-64, col. 1, lines 58-63, for example).

23. In response to applicant's argument that neither Bitter nor Tsai specifically teaches the advantage realized by the present invention of having an arresting device that is protected from strikes (p. 14 of the response, bottom of the page through at least the bottom of page 15), the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). Similarly, Applicant has also asserted that "[i]t is well known that in order to support a valid rejection the art must also suggest that it would accomplish applicant's results". However, it is noted that modifying the references in the manner described in detail above would indeed provide an arresting device that is not subject to strikes since the motor shaft 25 of the Bitter device, which is where the teachings of Tsai would lead one of ordinary skill in the art to place the arresting device, is offset from the spindle shaft 43 that undergoes the strikes, and thus this assertion is not persuasive.

24. Applicant has submitted Exhibits A through C as well as a declaration from Dr. Christian Heine, Product Manager at Robert Bosch GmbH, to attempt to establish evidentiary support of a secondary consideration of non-obviousness based on commercial success. However, the evidence submitted by Applicant is not sufficient to establish nonobviousness based on commercial success for several reasons, and has thus not rebutted the *prima facie* case of obviousness based on the combination of references as set forth in the above office action.

Firstly, it is noted that objective evidence of commercial success must be commensurate in scope with the claimed invention. *In re Tiffin*, 448 F.2d 791, 171 USPQ 294 (CCPA 1971). *Joy Technologies Inc. V. Manbeck*, 751 F. Supp. 225, 229, 17 USPQ2d 1257, 1260 (D.D.C. 1990), *aff'd*, 959 F.2d 226, 228, 22 USPQ2d 1153, 1156 (Fed. Cir. 1992). See also MPEP section 716.03(a). In the instant case, the declaration from Dr. Heine sets forth that the AUTOLOCK locking system providing for “a parallel shaft bearing the locking system so that the impact pressure resulting from the use of the impact drill is removed from the locking feature, thereby substantially enhancing the reliability and safety of the locking feature” has “proven to be of significant sales benefit with respect to impact drills manufactured and offered for sale by Robert Bosch GmbH”. However, it is again noted that no limitations limiting the claimed invention to a percussive tool, nor any limitations directed to an arresting device protected from or not subject to strikes, i.e., “so that the impact pressure resulting from the use of the impact drill is removed from the locking feature” as asserted by the declaration of Dr. Heine, are found in independent claims 15-16 (preambles set forth a “hand-guided drilling machine or percussion drilling machine”, and there are no further limitations in claims 15-16 that would limit the claimed invention to a percussion drilling machine). Thus, with respect to independent claims 15-16, the objective evidence of commercial success supplied by the declaration of Dr. Heine is not commensurate in scope with the claimed invention.

Furthermore, Exhibit A is described in the declaration of Dr. Heine as being related to volume and turnover of “AUTOLOCK equipped green impact drills”, and is thus also not evidence that is commensurate in scope with the claimed invention as set forth in claims 15-16.

Exhibit B is described in the declaration of Dr. Heine as being a “listing of the model numbers for Robert Bosch GmbH impact drills offered for sale by Robert Bosch GmbH in Germany and containing the AUTOLOCK feature”, and is thus also not evidence that is commensurate in scope with the claimed invention as set forth in claims 15-16.

Exhibit C is described in the declaration of Dr. Heine as being “representative advertisements in Germany, together with translations thereof, showing that impact drills having the AUTOLOCK feature are being actively and successfully offered for sale and sold in Germany”, and is thus also not evidence that is commensurate in scope with the claimed invention as set forth in claims 15-16.

25. Secondly, it is noted that an applicant who is asserting commercial success to support its contention of nonobviousness bears the burden of proof of establishing a nexus between the claimed invention and evidence of commercial success. In the instant case, the nexus between the claimed invention and evidence of commercial success has not been established for reasons that will be set forth in detail below.

Note that sales figures presented as evidence must be adequately defined (see MPEP section 716.03(b)). Specifically, gross sales figures do not show commercial success absent evidence as to market share, *Cable Electric Products, Inc. v. Genmark, Inc.*, 770 F.2d 1015, 226 USPQ 881 (Fed. Cir. 1985), or as to the time period during which the product was sold, or as to what sales would normally be expected in the market, *Ex parte Standish*, 10 USPQ2d 1454 (Bd. Pat. App. & Inter. 1988). Specifically, the only sales figures provided are found in the graph of Exhibit A titled “Share of AutoLock-Impact Drills”. Additionally, the declaration of Dr. Heine sets forth the following:

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Attached hereto as Exhibit "A" is a graph comparing the volume and turnover of AUTOLOCK equipped green impact drills manufactured and sold in Germany by Robert Bosch GmbH. It will be seen therefrom that impact drills for general consumer use with the AUTOLOCK function, generate almost half the total segment turnover with less than one-third of the sales volume during the first seven months of the year 2002.

The graph attached hereto as Exhibit "A" further demonstrates the substantial increase in sales of impact drills having the AUTOLOCK feature manufactured and sold by Robert Bosch GmbH for general consumer use from 1998 to date.

It will be seen from this graph that purchasers are willing to pay significantly more money for an AUTOLOCK equipped impact drill for general use than one not so equipped, because of its superior performance.

The commercial success of AUTOLOCK equipped drills manufactured and sold by Robert Bosch GmbH is such that with respect to impact drills intended for general consumer use, the share of AUTOLOCK equipped impact drills has climbed from almost nothing in 1998 to approximately 1 out of every 3 impact drills sold by Robert Bosch GmbH thus far in the year 2002, thereby accounting for almost one-half of the total sales of Bosch impact drills intended for consumer use in Germany in the year 2002.

As best understood from the above description of Exhibit A, Exhibit A only shows the share of volume (presumably an indication of the share of Bosch's total number of units sold) and turnover (presumably some sort of indication of the share of Bosch's total sales dollars from the description in the declaration that says "thereby accounting for almost one-half of the total sales of Bosch impact drills intended for consumer use in Germany in the year 2002") of the impact drill having the AUTOLOCK feature that Bosch itself has sold in the time period from 1998 to 2002. However, it is unclear from the submitted evidence exactly of what the percentages shown in the graph of Exhibit A represent a percentage, i.e., Bosch total sales, Bosch total impact drill sales, etc. Furthermore, none of the submitted evidence serves to set forth what sales would normally be expected in the market place under consideration during the time frame under consideration, *Ex parte Standish*, 10 USPQ2d 1454 (Bd. Pat. App. & Inter. 1988). Additionally, without further economic evidence, it would be improper to infer that the

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reported sales represent a substantial share of any definable market or whether the profitability per unit is anything out of the ordinary in the industry involved. *Cable Electric Products, Inc. v. Genmark, Inc.*, 770 F.2d 1015, 226 USPQ 881 (Fed. Cir. 1985). Also, note particularly that none of the submitted evidence relates any of the sales of an impact drill having the AUTOLOCK feature to any sort of overall impact drill market outside of Bosch's own sales, i.e., it is unclear how the sales figures submitted relate to any sort of share of the impact drill market, since the sales figures provided only serve to provide a comparison of Bosch sales figures to other Bosch sales figures.

Additionally, care should be taken to determine that the commercial success alleged is directly derived from the invention claimed, in a marketplace where the consumer is free to choose on the basis of objective principles, and that such success is not the result of heavy promotion or advertising, shift in advertising, consumptions by purchasers normally tied to applicant or assignee, or other business events extraneous to the merits of the claimed invention, etc. *In re Mageli*, 470 F.2d 1380, 176 USPQ 305 (CCPA 1973) (conclusory statements or opinions that increased sales were due to the merits of the invention are entitled to little weight); *In re Noznick*, 478 F.2d 1260, 178 USPQ 43 (CCPA 1973).

In the instant case, Exhibit C was provided to show, as set forth in the declaration by Dr. Heine, "representative advertisements in Germany, together with translations thereof, showing that impact drills having the AUTOLOCK feature are being actively and successfully offered for sale and sold in Germany". Note that the translation in Exhibit C sets forth that a "powerful launch campaign has been created to roll out the new Bosch impact drill" (page headed 21), and also describes several types of advertisements that were used for the Bosch tool (e.g., the print

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advertisement, the television commercial, the power of media, the brochure, the product tag, the overhead display to hang from the ceiling, the topper sign, etc.). Thus Exhibit C appears to tie any commercial success of the Bosch tool to the detailed advertising campaign described therein. Thus, it is unclear via Exhibit C and the accompanying statements relevant thereto presented in the declaration by Dr. Heine, whether any such commercial success is directly derived from the invention claimed, or whether it is the result of heavy promotion or advertising, shift in advertising, consumptions by purchasers normally tied to applicant or assignee, or other business events extraneous to the merits of the claimed invention, etc. *In re Mageli*, 470 F.2d 1380, 176 USPQ 305 (CCPA 1973), and thus for this reason also, the nexus between the claimed invention and evidence of commercial success has not been established. In other words, it is unclear based on the evidence presented in the declaration and Exhibit C whether any commercial success was based on heavy promotion or advertising, or a shift in advertising, of a tool that happens to have the AUTO-LOCK feature.

It is also noted that the only features of the Bosch tool that are described in the ads, per the English translation, are found in the following statements:

#### AUTOLOCK

Thanks to the Bosch Auto-Lock system--without peer anywhere in the world--replacing cutting tools is now effortless and accessory-free: Simply open the chuck, replace the tool, and close. Done!

#### Easy to use

With the launch of the new PSB 750-2-RPE/RE, Bosch again demonstrates its expertise in the field of high-output impact drills.

The innovative comfortable-handling concept that includes Bosch Auto-Lock, the vibration dampening feature and Slimline design makes work easier than ever before.

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Note that even assuming that Applicant provides further evidence to somehow show that any commercial success was not based on heavy promotion or advertising or a shift in advertising of the newly-offered product, Exhibit C is not sufficient to show that any commercial success is directly derived from the invention claimed. Claims 15 and 16 aside, Applicant has continually asserted that the distinction between the presently-claimed invention and the prior art lies in the arresting device and its positioning in an offset location from the striking of the percussive tool. However, the advertisement set forth in Exhibit C does not provide any teaching of an arresting device that is so positioned, and thus does not serve to show that any commercial success is directly derived from the invention claimed. Additionally, Exhibit C specifically teaches that the newly-offered product, “new PSB 750-2-RPE/RE”, which per Exhibit B and the declaration by Dr. Heine, is a general use impact drill, includes other desirable features in addition to the Auto-Lock feature, such as “the vibration dampening feature and Slimline design” that make “work easier than ever before”. Note that neither of these features (the vibration dampening feature nor the Slimline design) are set forth in the presently-claimed invention, and thus, Exhibit C further renders it unclear whether any commercial success of the newly-offered product is directly derived from a drill having an Auto-Lock feature that is as claimed, or whether such commercial success is derived from other features such as the described vibration dampening feature or Slimline design, for example. Merely showing that there was commercial success of an article which embodied the invention is not sufficient. *Ex parte Remark*, 15 USPQ2d 1498, 1502-02 (Bd. Pat. App. & Inter. 1990).

26. Note that the bulk of Applicant’s arguments are based on the combination of the Bitter et al. and the Tsai references, which arguments have been addressed above. It is noted that the



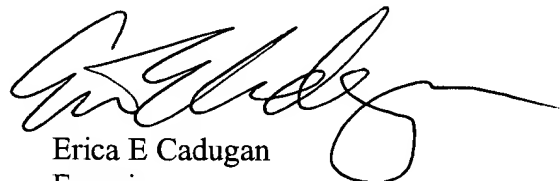
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Zagar reference was also relied upon in combination with the Bitter et al. and Tsai references, and thus the above responses to Applicant's arguments are considered to equally apply to the rejections based on a combination of Bitter et al., Tsai, and Zagar.

27. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erica E Cadugan whose telephone number is (703) 308-6395. The examiner can normally be reached on M-F, 7:30 a.m. to 5:00 p.m., alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea L. Wellington can be reached on (703) 308-2159. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.



Erica E Cadugan  
Examiner  
Art Unit 3722

eec

November 27, 2002